

REMARKS

Applicants extend their appreciation to the Examiner for granting an office interview in the above-identified application. In the interview, it was discussed that claims 1-9 would be canceled and new claims 10-15 would be added. Accordingly, claims 10-15 are pending.

Claims 10-15 comply with 35 U.S.C. §112 and are patentable over the art of record, including Lysakowski, U.S. Patent No. 5,434,971, Ahmed et al., U.S. Patent No. 4,819,176 and Smith et al., Publication US 2002/0143725.

As discussed in the interview, the present invention is directed to the registering of reagent parameters in an analytical apparatus wherein the reagents are supplied by different reagent manufacturers. The Applicants have recognized that it is difficult to start up an analytical apparatus and place it in use when the required reagents of a plurality of a reagent manufacturers are used since the parameters for each of the reagents need to be entered to complete the reagent set up or reagent parameter set up steps of operation of the analytical apparatus.

For example, the same steps for reagent set up are repeated for each company or reagent manufacturer in order to complete reagent set up of the apparatus, thereby delaying the parameter registration steps of the reagent set up operations in the conventional analytical apparatus. In the present invention, the reagent parameters of reagents supplied by reagent manufacturers are stored in a storage medium and the reagent parameters are set corresponding to the specifications of the reagents by using the stored parameters. In this way, the reagent parameters to be set in the respective analytical apparatus can be registered on the basis of the reagent parameters stored in the storage medium. This avoids the requirement to repeat the same steps of reagent set up for each company or reagent manufacturer, as is required in the prior art.

According to the invention, the automatic analyzer performs analysis by mixing the sample with the reagent in order to perform the qualitative and quantitative analysis of the special components contained in the sample, such as blood or urine. The absorbent change is detected by using a photometer and is compared with that of a standard sample.

The number of such analysis items extends to several hundred, and in practice the reagent for such analysis items is not supplied by only one reagent manufacturer. Accordingly, the user of the automatic analyzer must deal with reagents supplied by different reagent manufacturers.

Figure 2 shows a reagent for an analysis item 1 that is supplied by the reagent manufacturers A, B, and C. The reagent for the analysis item 2 is supplied by the reagent manufacturers A, B, but not reagent manufacturer C. Further the reagent for the analysis item 3 is supplied by the manufacturers B, C, and not the reagent manufacturer A. Accordingly, when the reagent for the analysis items 1, 2, 3, 5, 7 and 8 (not 4 and 6) is to be used, the reagent for the analysis item 1 is selected to be supplied by the reagent manufacturer A, the reagent for the analysis item 2 is supplied by the reagent manufacturer B, whereas the reagent for analysis item 3 is supplied by reagent manufacturer A. Based on the detected absorbance of an analysis item as compared with that of a standard sample, and using a calibration curve between the concentration and the absorbance, the concentration is determined.

One having ordinary skill in the art is aware that calibration curves vary according to the reagent manufacturers. The calibration curve that is used to convert the detected absorbance to the concentration is an example of one of the reagent parameters that is discussed in the specification by Applicants. When the customer uses reagents manufactured by reagent manufacturers A, B and C, the reagent parameters relating to the analysis items 1 and 3 are stored by the reagent manufacturer A to the automatic analyzer by retrieval from a Floppy Disk storing the reagent parameters. In the same way, the reagent parameters for the reagent manufacturers B and C are stored in the automatic analyzer by retrieval from a Floppy Disk, for example.

The operation of an automatic analyzer using the reagent set up method and processing apparatus of the present invention is more efficient than that of automatic analyzers set up in a conventional manner. That is, according to the conventional set up method, after finishing the reagent set up for the reagents of manufacturer A, the reagent set up for the reagents of manufacturer B is performed and then the reagent set up for the reagents of manufacturer C is performed, in a

serial manner. Accordingly, it takes a long time to start the automatic analyzer.

By the invention, as shown in Fig. 1, the reagents and apparatus service companies store the reagent parameters of the reagents supplied by the reagent manufacturers and after it is determined which of the reagents are to be used, based on the analysis items to be performed, the reagent set up for the reagents of the specific manufacturers is accomplished by registering the reagent parameters in the respective analytical apparatus. Accordingly, all of the set up of the reagent parameters supplied by the various reagent manufacturers is performed in a short period of time.

Art Rejections

The prior art of record does not disclose the claimed reagent set up method steps and therefore claims 10-15 should be found to be allowable. Specifically, Lysakowski discloses a method in which data of analytical instruments is modeled with a specific configuration data structure to allow for data storage and interchange of data from one scientific instrument to another. For example, Fig. 6 shows a data model for a

generic chromatography data arrangement. Further, Fig. 4 shows the flow diagram for processing of a sample and an analytical instrument capable of measuring the amounts of several hundred different substances. Fig. 5 shows a hierarchical data model for use in handling the data storage requirements of the analytical, physical and chemical data. Instrument calibration 220 is one of the classifications of data that is stored. As a class, instrument calibration 220 has a calibration algorithm subclass 224, which is representative of several calibrations that might be required for the instrument. See column 8, lines 5-59 of the patent. Lysakowski does not disclose storing reagent parameters of reagents of plural reagent manufacturers in a storage medium, as in present invention, in which the reagent parameter set up is accomplished by using the reagent parameters stored in the storage medium (claim 10).

The Examiner also applied Ahmed et al. and Smith et al. Ahmed et al is relied upon for disclosing a system wherein information such as quality of materials supplied from a supplier, quality of products, effect of the business and the yield ratio of the finished products are transmitted from a

remote station to a central computer. The system of the patent was designed for food processing but may be applied in other processing where desired yield and equivalent information is collected (See column 4, lines 28-31 of the patent). The references does not disclose or suggest the reagent set up method and reagent processing apparatus of the present invention set forth in claim 10-15.

Smith is relied upon for disclosing a method for determining parameters for chemical syntheses and support supplying the reagents, equipment, and/or chemicals synthesized thereby. Fig. 17 shows a block 1720 in which the listing of the reagent chemicals that are used to synthesize the target chemical is located and displayed along with the listing of the equipment and a listing of procedures that are used to synthesize the target chemical. The references does not disclose storing reagent parameters of reagents' manufacturers into a storage medium and providing the reagent parameters for reagent set up in an analytical apparatus, as in the present invention. Further, the references does not disclose or suggest the reagent set up processing apparatus of the invention, which includes a specifications-parameter means

for providing a reagent parameter set corresponding to specifications of reagents to be used in the analytical apparatus and stored on a storage medium.

Drawings

Applicants have amended Fig. 2 to correct the inadvertent mislabeling, as shown. Also, Fig. 1 has been labeled "PRIOR ART", as required.

Conclusion

In view of the foregoing amendments and remarks, Applicants contend that the above-identified application is now in condition for allowance. Accordingly, reconsideration and reexamination is requested.

Respectfully submitted,



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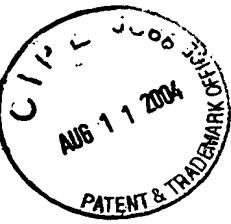


FIG. 1

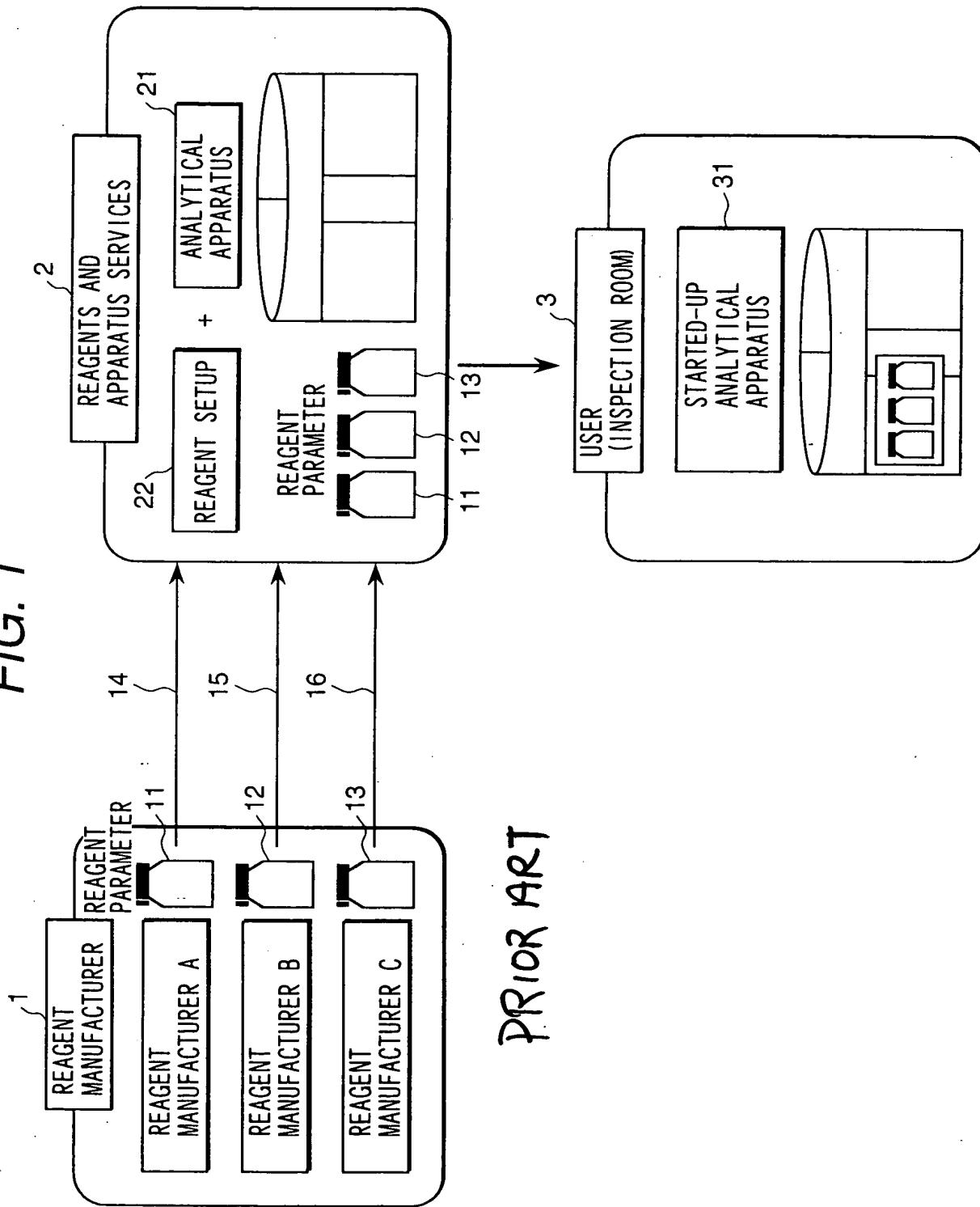


FIG. 2

